

WEST Search History

DATE: Friday, October 28, 2005

| Hide? | Set Name | Query | Hit Count |
|--------------------------|----------|---|-----------|
| | | <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i> | |
| <input type="checkbox"/> | L7 | L6 and fischer tropesch | 24 |
| <input type="checkbox"/> | L6 | L4 and adjust\$3 with (syngas or synthesis gas) | 59 |
| | | <i>DB=TDBD; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i> | |
| <input type="checkbox"/> | L5 | L4 and adjust\$3 near4 (syngas or synthesis gas) | 0 |
| | | <i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ</i> | |
| <input type="checkbox"/> | L4 | L3 and remov\$3 near3 hydrogen | 1002 |
| <input type="checkbox"/> | L3 | L1 and remov\$3 near6 carbon dioxide | 1894 |
| <input type="checkbox"/> | L2 | L1 and synthesis gas | 3503 |
| <input type="checkbox"/> | L1 | carbon monoxide with carbon dioxide with hydrogen | 13552 |

END OF SEARCH HISTORY

Hit List

First Hit

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Fwd Refs

Bkwd Refs

Generate OACS

Search Results - Record(s) 1 through 24 of 24 returned.

☐ 1. Document ID: US 20050148806 A1

L7: Entry 1 of 24

File: PGPB

Jul 7, 2005

PGPUB-DOCUMENT-NUMBER: 20050148806

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050148806 A1

TITLE: Method for the preparation of lower olefines by steam cracking

PUBLICATION-DATE: July 7, 2005

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|----------------------------------|-----------|-------|---------|
| Cruijsberg, Emil Eduard Antonius | Amsterdam | | NL |
| Westrenen, Jeroen Van | Amsterdam | | NL |

US-CL-CURRENT: 585/652

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | INQC | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|---------|

☐ 2. Document ID: US 20050137270 A1

L7: Entry 2 of 24

File: PGPB

Jun 23, 2005

PGPUB-DOCUMENT-NUMBER: 20050137270

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050137270 A1

TITLE: Modification of a methanol plant for converting natural gas to liquid hydrocarbons

PUBLICATION-DATE: June 23, 2005

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|------------------------------|-----------------|-------|---------|
| Tijm, Peter Jacobus Adrianus | Golden | CO | US |
| Loring, David | New York City | NY | US |
| Noda, Leigh Takeo | Manhattan Beach | CA | US |

US-CL-CURRENT: 518/702

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DOC | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|

☐ 3. Document ID: US 20050107480 A1

L7: Entry 3 of 24

File: PGPB

May 19, 2005

PGPUB-DOCUMENT-NUMBER: 20050107480

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050107480 A1

TITLE: Installation and method for producing and disaggregating synthesis gases
from natural gas

PUBLICATION-DATE: May 19, 2005

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|----------------|----------------|-------|---------|
| Davey, William | Frankfurt/Main | | DE |
| Meyer, Manfred | Friedrichsdorf | | DE |

US-CL-CURRENT: 518/726; 422/189

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DOC | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|
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☐ 4. Document ID: US 20040101473 A1

L7: Entry 4 of 24

File: PGPB

May 27, 2004

PGPUB-DOCUMENT-NUMBER: 20040101473

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040101473 A1

TITLE: Hydrocarbon gas to liquid conversion process

PUBLICATION-DATE: May 27, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|----------------------|------------|-------|---------|
| Wang, Daxiang | Ponca City | OK | US |
| Belt, Barbara A. | Seabrook | TX | US |
| Melquist, Vincent H. | Ponca City | OK | US |
| Landis, Steve R. | Katy | TX | US |

US-CL-CURRENT: 423/651

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DOC | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|---------|

☐ 5. Document ID: US 20030236312 A1

L7: Entry 5 of 24

File: PGPB

Dec 25, 2003

PGPUB-DOCUMENT-NUMBER: 20030236312
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030236312 A1

TITLE: Process for conversion of LPG and CH4 to syngas and higher valued products

PUBLICATION-DATE: December 25, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|-------------------|----------|-------|---------|
| O'Rear, Dennis J. | Petaluma | CA | US |

US-CL-CURRENT: 518/728

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

☐ 6. Document ID: US 20030050348 A1

L7: Entry 6 of 24

File: PGPB

Mar 13, 2003

PGPUB-DOCUMENT-NUMBER: 20030050348
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030050348 A1

TITLE: Hydrocarbon conversion process using a plurality of synthesis gas sources

PUBLICATION-DATE: March 13, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|---------------------|-------|-------|---------|
| Kennedy, Paul Edwin | Tulsa | OK | US |

US-CL-CURRENT: 518/702

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
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☐ 7. Document ID: US 20030010677 A1

L7: Entry 7 of 24

File: PGPB

Jan 16, 2003

PGPUB-DOCUMENT-NUMBER: 20030010677
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20030010677 A1

TITLE: Conversion of C1-C3 alkanes and Fischer-Tropsch products to normal alpha olefins and other liquid hydrocarbons

PUBLICATION-DATE: January 16, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|----------------------|------------|-------|---------|
| Schinski, William L. | San Rafael | CA | US |

US-CL-CURRENT: 208/58

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | EMC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|----------|

☐ 8. Document ID: US 20020193649 A1

L7: Entry 8 of 24

File: PGPB

Dec 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020193649

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020193649 A1

TITLE: Synthesis of high quality normal alpha olefins

PUBLICATION-DATE: December 19, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|----------------------|----------------|-------|---------|
| O'Rear, Dennis J. | Petaluma | CA | US |
| Schinski, William L. | San Rafael | CA | US |
| Elomari, Saleh | Richmond | CA | US |
| Reynolds, Richard N. | Point Richmond | CA | US |
| Herron, Steven J. | Houston | TX | US |

US-CL-CURRENT: 585/324; 585/16, 585/330

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | EMC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|----------|

☐ 9. Document ID: US 20020155061 A1

L7: Entry 9 of 24

File: PGPB

Oct 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020155061

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020155061 A1

TITLE: Syngas production method utilizing an oxygen transport membrane

PUBLICATION-DATE: October 24, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|--------------------------------|---------------|-------|---------|
| Prasad, Ravi | East Amherst | NY | US |
| Schwartz, Joseph Michael | Williamsville | NY | US |
| Robinson, Earl T. | Mentor | OH | US |
| Gottzmann, Christian Friedrich | Clarence | NY | US |

US-CL-CURRENT: 423/652; 423/418.2

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DDOC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

☐ 10. Document ID: US 20010027220 A1

L7: Entry 10 of 24

File: PGPB

Oct 4, 2001

PGPUB-DOCUMENT-NUMBER: 20010027220

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010027220 A1

TITLE: Hydrocarbon conversion process using a plurality of synthesis gas sources

PUBLICATION-DATE: October 4, 2001

INVENTOR-INFORMATION:

| NAME | CITY | STATE | COUNTRY |
|---------------------|-------|-------|---------|
| Kennedy, Paul Edwin | Tulsa | OK | US |

US-CL-CURRENT: 518/702

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DDOC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

☐ 11. Document ID: US 6797252 B2

L7: Entry 11 of 24

File: USPT

Sep 28, 2004

US-PAT-NO: 6797252

DOCUMENT-IDENTIFIER: US 6797252 B2

TITLE: Hydrocarbon gas to liquid conversion process

DATE-ISSUED: September 28, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|----------------------|------------|-------|----------|---------|
| Wang; Daxiang | Ponca City | OK | | |
| Belt; Barbara A. | Seabrook | TX | | |
| Melquist; Vincent H. | Ponca City | OK | | |
| Landis; Steve R. | Katy | TX | | |

US-CL-CURRENT: 423/651; 252/373, 518/700, 518/703

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | DDOC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|------|----------|

☐ 12. Document ID: US 6774148 B2

L7: Entry 12 of 24

File: USPT

Aug 10, 2004

US-PAT-NO: 6774148

DOCUMENT-IDENTIFIER: US 6774148 B2

TITLE: Process for conversion of LPG and CH4 to syngas and higher valued products

DATE-ISSUED: August 10, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|-------------------|----------|-------|----------|---------|
| O'Rear; Dennis J. | Petaluma | CA | | |

US-CL-CURRENT: 518/702; 252/373, 518/703, 518/705, 518/706, 518/715

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | DOC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|----------|

☐ 13. Document ID: US 6749828 B1

L7: Entry 13 of 24

File: USPT

Jun 15, 2004

US-PAT-NO: 6749828

DOCUMENT-IDENTIFIER: US 6749828 B1

**** See image for Certificate of Correction ****

TITLE: Process for reforming hydrocarbon

DATE-ISSUED: June 15, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|-------------------|-----------|-------|----------|---------|
| Fukunaga; Tetsuya | Sodegaura | | | JP |

US-CL-CURRENT: 423/651; 252/373

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | DOC | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|----------|

☐ 14. Document ID: US 6695983 B2

L7: Entry 14 of 24

File: USPT

Feb 24, 2004

US-PAT-NO: 6695983

DOCUMENT-IDENTIFIER: US 6695983 B2

TITLE: Syngas production method utilizing an oxygen transport membrane

DATE-ISSUED: February 24, 2004

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|--------------------------|---------------|-------|----------|---------|
| Prasad; Ravi | East Amherst | NY | | |
| Schwartz; Joseph Michael | Williamsville | NY | | |

Robinson; Earl T. Mentor OH
Gottzmann; Christian Friedrich Clarence NY

US-CL-CURRENT: 252/373

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FOI/O | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|

☐ 15. Document ID: US 6512018 B2

L7: Entry 15 of 24

File: USPT

Jan 28, 2003

US-PAT-NO: 6512018

DOCUMENT-IDENTIFIER: US 6512018 B2

TITLE: Hydrocarbon conversion process using a plurality of synthesis gas sources

DATE-ISSUED: January 28, 2003

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|-------|-------|----------|---------|
| Kennedy; Paul Edwin | Tulsa | OK | | |

US-CL-CURRENT: 518/715; 518/700, 518/702, 518/703, 518/704

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FOI/O | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|

☐ 16. Document ID: US 6497812 B1

L7: Entry 16 of 24

File: USPT

Dec 24, 2002

US-PAT-NO: 6497812

DOCUMENT-IDENTIFIER: US 6497812 B1

TITLE: Conversion of C1-C3 alkanes and fischer-tropsch products to normal alpha olefins and other liquid hydrocarbons

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|----------------------|------------|-------|----------|---------|
| Schinski; William L. | San Rafael | CA | | |

US-CL-CURRENT: 208/131; 208/313, 208/78, 208/80, 208/950, 518/702, 585/304,
585/648, 585/820, 585/829

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FOI/O | Draw D. |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-------|---------|

☐ 17. Document ID: US 6369286 B1

L7: Entry 17 of 24

File: USPT

Apr 9, 2002

US-PAT-NO: 6369286

DOCUMENT-IDENTIFIER: US 6369286 B1

TITLE: Conversion of syngas from Fischer-Tropsch products via olefin metathesis

DATE-ISSUED: April 9, 2002

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|-------------------|----------|-------|----------|---------|
| O'Rear; Dennis J. | Petaluma | CA | | |

US-CL-CURRENT: 585/644; 585/324, 585/643

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|
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☐ 18. Document ID: US 6110979 A

L7: Entry 18 of 24

File: USPT

Aug 29, 2000

US-PAT-NO: 6110979

DOCUMENT-IDENTIFIER: US 6110979 A

TITLE: Utilization of synthesis gas produced by mixed conducting membranes

DATE-ISSUED: August 29, 2000

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|--------------------|-----------|-------|----------|---------|
| Nataraj; Shankar | Allentown | PA | | |
| Russek; Steven Lee | Allentown | PA | | |

US-CL-CURRENT: 518/704; 252/373, 423/652

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|
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☐ 19. Document ID: US 6048472 A

L7: Entry 19 of 24

File: USPT

Apr 11, 2000

US-PAT-NO: 6048472

DOCUMENT-IDENTIFIER: US 6048472 A

TITLE: Production of synthesis gas by mixed conducting membranes

DATE-ISSUED: April 11, 2000

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|------|------|-------|----------|---------|
|------|------|-------|----------|---------|

| | | |
|---------------------|-----------|----|
| Nataraj; Shankar | Allentown | PA |
| Moore; Robert Byron | Allentown | PA |
| Russek; Steven Lee | Allentown | PA |

US-CL-CURRENT: 252/373; 423/650, 423/652

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | Publ | Draw |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|------|
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☐ 20. Document ID: US 5763716 A

L7: Entry 20 of 24

File: USPT

Jun 9, 1998

US-PAT-NO: 5763716

DOCUMENT-IDENTIFIER: US 5763716 A

TITLE: Process for the production of hydrocarbons

DATE-ISSUED: June 9, 1998

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|-------------|-------|----------|---------|
| Benham; Charles B. | Arvada | CO | | |
| Bohn; Mark S. | Golden | CO | | |
| Yakobson; Dennis L. | Westminster | CO | | |

US-CL-CURRENT: 585/315; 518/702, 518/704, 518/719, 518/721, 585/314, 585/640, 585/733

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | Publ | Draw |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|------|

☐ 21. Document ID: US 5621155 A

L7: Entry 21 of 24

File: USPT

Apr 15, 1997

US-PAT-NO: 5621155

DOCUMENT-IDENTIFIER: US 5621155 A

TITLE: Process for the production of hydrocarbons

DATE-ISSUED: April 15, 1997

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|-------------|-------|----------|---------|
| Benham; Charles B. | Arvada | CO | | |
| Bohn; Mark S. | Golden | CO | | |
| Yakobson; Dennis L. | Westminster | CO | | |

US-CL-CURRENT: 585/310; 518/703, 518/704, 585/469, 585/733

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|

☐ 22. Document ID: US 5620670 A

L7: Entry 22 of 24

File: USPT

Apr 15, 1997

US-PAT-NO: 5620670

DOCUMENT-IDENTIFIER: US 5620670 A

TITLE: Process for the production of hydrocarbons

DATE-ISSUED: April 15, 1997

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|-------------|-------|----------|---------|
| Benham; Charles B. | Arvada | CO | | |
| Bohn; Mark S. | Golden | CO | | |
| Yakobson; Dennis L. | Westminster | CO | | |

US-CL-CURRENT: 422/213; 422/211, 422/234, 518/703, 518/705, 518/711, 518/715,
518/719

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|
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☐ 23. Document ID: US 5324335 A

L7: Entry 23 of 24

File: USPT

Jun 28, 1994

US-PAT-NO: 5324335

DOCUMENT-IDENTIFIER: US 5324335 A

TITLE: Process for the production of hydrocarbons

DATE-ISSUED: June 28, 1994

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|-------------|-------|----------|---------|
| Benham; Charles B. | Arvada | CO | | |
| Bohn; Mark S. | Golden | CO | | |
| Yakobson; Dennis L. | Westminster | CO | | |

US-CL-CURRENT: 44/452; 44/451, 518/703, 518/704

| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | FIGS | Drawings |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|----------|

☐ 24. Document ID: US 4526903 A

L7: Entry 24 of 24

File: USPT

Jul 2, 1985

US-PAT-NO: 4526903
DOCUMENT-IDENTIFIER: US 4526903 A

TITLE: Process for the production of synthesis gas from coal

DATE-ISSUED: July 2, 1985

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---------------------|--------|-------|----------|---------|
| Cummings; Donald R. | Sydney | | | AU |

US-CL-CURRENT: 518/704; 252/373, 48/210, 48/214R

| | | | | | | | | | | | | |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|--------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | | | Claims | EMC | Export |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|-----|--------|

[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

| Term | Documents |
|--|-----------|
| FISCHER | 97591 |
| FISCHERS | 59 |
| TROPSCH | 10690 |
| TROPSCHES | 0 |
| (6 AND (FISCHER ADJ TROPSCH)) . PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD. | 24 |
| (L6 AND FISCHER TROPSCH) . PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD. | 24 |

Display Format: [CIT](#)

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=> s adjust? (4a) (syngas or synthesis gas or hydrogen (2a) carbon monoxide)

251275 ADJUST?
3733 SYNGAS
15 SYNGASES
3739 SYNGAS
(SYNGAS OR SYNGASES)
1210479 SYNTHESIS
3 SYNTHESISSES
65416 SYNTHESSES
1247321 SYNTHESIS
(SYNTHESIS OR SYNTHESISSES OR SYNTHESSES)
1460335 GAS
496679 GASES
1637697 GAS
(GAS OR GASES)
15975 SYNTHESIS GAS
(SYNTHESIS (W) GAS)
892941 HYDROGEN
5638 HYDROGENS
896109 HYDROGEN
(HYDROGEN OR HYDROGENS)
1152276 CARBON
25288 CARBONS
1161370 CARBON
(CARBON OR CARBONS)
170064 MONOXIDE
982 MONOXIDES
170583 MONOXIDE
(MONOXIDE OR MONOXIDES)
143931 CARBON MONOXIDE
(CARBON (W) MONOXIDE)

L8 55 ADJUST? (4A) (SYNGAS OR SYNTHESIS GAS OR HYDROGEN (2A) CARBON MONOXIDE)

=> s l8 and carbon dioxide

1152276 CARBON
25288 CARBONS
1161370 CARBON
(CARBON OR CARBONS)
444036 DIOXIDE
6518 DIOXIDES
445689 DIOXIDE
(DIOXIDE OR DIOXIDES)
209897 CARBON DIOXIDE
(CARBON (W) DIOXIDE)

L9 17 L8 AND CARBON DIOXIDE

=> s l9 and fischer tropsch

23089 FISCHER
15 FISCHERS
23101 FISCHER
(FISCHER OR FISCHERS)
7737 TROPSCH
7637 FISCHER TROPSCH
(FISCHER (W) TROPSCH)

L10 6 L9 AND FISCHER TROPSCH

=> d l10 ibib ab 1-6

L10 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:547290 CAPLUS
DOCUMENT NUMBER: 143:61749

TITLE: Modification of a methanol plant for converting natural gas into liquid hydrocarbons
 INVENTOR(S): Tijm, Peter Jacobus Adrianus; Loring, David; Noda, Leigh Takeo
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 9 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| US 2005137270 | A1 | 20050623 | US 2004-804803 | 20040319 |
| CA 2468004 | AA | 20050623 | CA 2004-2468004 | 20040521 |
| PRIORITY APPLN. INFO.: | | | US 2003-532148P | P 20031223 |
| | | | US 2004-804803 | A 20040319 |

AB A gas-to-liquid (GTL) process and system for converting a natural gas into liquid hydrocarbons where the equipment subsystems from existing gas-to-methanol plants are re-utilized in the GTL process are described. The synthesis gas generator from the methanol plant is used to generate synthesis gas in the present process. The synthesis gas is then adjusted to remove CO₂ and H₂ before the synthesis gas is passed through a Fischer-Tropsch (FT) reactor to convert the synthesis gas into liquid hydrocarbons. The FT reactor is comprised of the same equipment that was used previously to convert synthesis gas into methanol except for the resp. catalysts. The liquid hydrocarbons are then upgraded via distillation and separated into individual hydrocarbon products.

L10 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:453817 CAPLUS
 DOCUMENT NUMBER: 142:483863
 TITLE: Control of carbon dioxide emissions from a fischer-tropsch facility by use of dual functional syngas conversion
 INVENTOR(S): O'Rear, Dennis J.; Kibby, Charles L.
 PATENT ASSIGNEE(S): Chevron U.S.A. Inc., USA
 SOURCE: U.S. Pat. Appl. Publ., 11 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| US 2005113463 | A1 | 20050526 | US 2003-720673 | 20031125 |
| WO 2005054163 | A1 | 20050616 | WO 2004-US35607 | 20041026 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG GB 2408745 A1 20050608 GB 2004-24278 20041102 NL 1027594 A1 20050527 NL 2004-1027594 20041125 PRIORITY APPLN. INFO.: US 2003-720673 A 20031125 | | | | |

AB CO2 emissions from syngas conversion processes are reduced by the use of a multi-stage Fischer-Tropsch reaction system which comprises forming a first synthesis gas and reacting at least a portion of the first synthesis gas in a Fischer-Tropsch reactor to form a first hydrocarbonaceous product and a second synthesis gas. The second synthesis gas is mixed with a hydrogen-containing stream to provide an adjusted synthesis gas, at least a portion of which is reacted in a dual-functional synthesis gas conversion reactor to form a second hydrocarbonaceous product and a third synthesis gas comprising a reduced amount of CO2 than was present in the adjusted synthesis gas. Process flow diagrams are presented.

L10 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:450944 CAPLUS
DOCUMENT NUMBER: 142:484582
TITLE: Control of carbon dioxide emissions from a Fischer-Tropsch facility by use of multiple reactors
INVENTOR(S): O'Rear, Dennis J.; Kibby, Charles L.
PATENT ASSIGNEE(S): Chevron U.S.A. Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| US 2005113465 | A1 | 20050526 | US 2003-720675 | 20031125 |
| WO 2005054165 | A1 | 20050616 | WO 2004-US35610 | 20041026 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| GB 2408744 | A1 | 20050608 | GB 2004-24202 | 20041101 |
| NL 1027592 | A1 | 20050527 | NL 2004-1027592 | 20041125 |
| PRIORITY APPLN. INFO.: | | | US 2003-720675 | A 20031125 |

AB CO2 emissions from Fischer-Tropsch facilities are controlled by using multiple reactors in a process which comprises using multiple Fischer-Tropsch reactors comprising reacting at least a portion of a first synthesis gas in a first Fischer-Tropsch reactor to form a first hydrocarbonaceous product and a second syngas. The second synthesis gas is mixed with a H2-containing stream to form an adjusted synthesis gas. At least a portion of the adjusted synthesis gas is reacted in a second Fischer-Tropsch reactor to form a second hydrocarbonaceous product and a third synthesis gas. At least a portion of the first and second hydrocarbonaceous products are blended to obtain a blended hydrocarbonaceous product (e.g., diesel fuel). Process flow diagrams are presented.

L10 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1037017 CAPLUS
DOCUMENT NUMBER: 141:426120
TITLE: Manufacture of synthesis gas and its conversion into hydrocarbons by Fischer-Tropsch

reaction
 INVENTOR(S): Hensman, John Richard
 PATENT ASSIGNEE(S): Davy Process Technology Limited, UK
 SOURCE: PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2004103896 | A1 | 20041202 | WO 2004-GB2210 | 20040521 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

PRIORITY APPLN. INFO.: GB 2003-11725 A 20030521
 AB Synthesis gas is produced by steam reforming of a methane-containing gas stream, especially natural gas, and subjecting the synthesis gas to Fischer-Tropsch reaction to produce hydrocarbons. Water produced in the Fischer-Tropsch reaction process is recycled to the steam reforming process. The recycled water contains contaminants, such as alcs., aldehydes, ketones, acids, or CO₂. The composition of the synthesis gas is adjusted prior to the Fischer-Tropsch reaction by CO₂ adsorption, or membrane separation using mol. sieves.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:17588 CAPLUS
 DOCUMENT NUMBER: 140:79590
 TITLE: Adjusting Wobbe index ratios of fuel blends in a GTL facility
 INVENTOR(S): O'Rear, Dennis J.; Van Gelder, Roger D.; Steynberg, Andre Peter
 PATENT ASSIGNEE(S): Sasol Technology (Pty.) Limited, S. Afr.; Chevron U.S.A. Inc.
 SOURCE: Brit. UK Pat. Appl., 32 pp.
 CODEN: BAXXDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| GB 2390371 | A1 | 20040107 | GB 2003-14474 | 20030620 |
| GB 2390371 | B2 | 20040915 | | |
| US 2004013987 | A1 | 20040122 | US 2002-189147 | 20020702 |
| US 6896707 | B2 | 20050524 | | |
| GB 2400857 | A1 | 20041027 | GB 2004-14808 | 20030620 |
| GB 2400857 | B2 | 20050608 | | |
| GB 2401111 | A1 | 20041103 | GB 2004-14807 | 20030620 |
| GB 2401111 | B2 | 20050511 | | |
| ZA 2003005034 | A | 20040512 | ZA 2003-5034 | 20030627 |

WO 2004005440 A1 20040115 WO 2003-US20901 20030701
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, UZ, VC, VN, YU, ZA, ZM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
BR 2003012384 A 20050412 BR 2003-12384 20030701
JP 2005532527 T2 20051027 JP 2004-519808 20030701
NL 1023801 A1 20040106 NL 2003-1023801 20030702
NL 1023801 C2 20040927

PRIORITY APPLN. INFO.:

US 2002-189147 A 20020702
GB 2003-14474 A3 20030620
WO 2003-US20901 W 20030701

AB Disclosed are a method of combusting a fuel in a utility unit of a GTL facility, a GTL utilities fuel mixture and a method of sustaining the energy needs of a GTL facility. The fuel mixture, and fuel used in the methods comprises a blend of a 1st component, with a high Wobbe index tail gas. The two components are blended to give a Wobbe index ratio of between 0.33 and 3.0 by adjusting the Wobbe index of one of the components. The high Wobbe index gas may be diluted LPG, methane added. Also disclosed are fuel blend comps. having Wobbe indexes of <1000 and .apprx.480.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:556039 CAPLUS
DOCUMENT NUMBER: 105:156039
TITLE: Synthesis gas production
INVENTOR(S): Horton, Anthony
PATENT ASSIGNEE(S): Humphreys and Glasgow Ltd., UK
SOURCE: Brit. UK Pat. Appl., 2 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| GB 2168719 | A1 | 19860625 | GB 1984-27289 | 19841029 |
| GB 2168719 | B2 | 19881019 | | |

PRIORITY APPLN. INFO.: GB 1984-27289 19841029

AB A process for the production of synthesis gas containing CO and H of a desired ratio comprises addition of a CO2-containing stream to a feed hydrocarbon, passing the mixture to a CO2 removal unit, passing product from the CO2 removal unit to a reformer, passing product from the reformer to a synthesis gas utilization unit, and tail gas from the synthesis gas utilization unit through a CO shift catalyst in a controlled manner. Synthesis gas of a desired composition can be obtained without further processing the product from the reformer. The process is especially suitable for manufacture of recycle synthesis gas from Fischer-Tropsch tail gas.